

Title (en)

Polycrystalline diamond body and method of making same.

Title (de)

Polykristalline diamanthaltige Körper und Verfahren zu ihrer Herstellung.

Title (fr)

Corps diamanté polycristallin et procédé pour sa fabrication.

Publication

EP 0019824 A1 19801210 (EN)

Application

EP 80102751 A 19800519

Priority

US 4223779 A 19790524

Abstract (en)

[origin: US4231195A] An adherently bonded polycrystalline diamond body is produced by forming a charge composed of a mass of diamond crystals in contact with a mass of eutectiferous silicon-rich alloy wherein the alloy is in contact or in association with hexagonal boron nitride, confining such charge within a reaction chamber, subjecting the confined charge to a pressure of at least 25 kilobars, heating the pressure-maintained charge to a temperature sufficient to melt the alloy and at which no significant graphitization of the diamond occurs whereby the alloy infiltrates through the interstices between the diamond crystals producing said body.

IPC 1-7

C01B 31/06; B24D 3/08; C22C 29/00

IPC 8 full level

C04B 35/52 (2006.01); **B01J 3/06** (2006.01); **B24D 3/08** (2006.01); **C01B 31/06** (2006.01); **C22C 26/00** (2006.01); **C22C 29/00** (2006.01)

CPC (source: EP US)

B01J 3/062 (2013.01 - EP US); **B24D 3/08** (2013.01 - EP US); **C04B 35/52** (2013.01 - EP US); **C04B 35/6316** (2013.01 - EP US); **C04B 35/645** (2013.01 - EP US); **C22C 26/00** (2013.01 - EP US); **B01J 2203/062** (2013.01 - EP US); **B01J 2203/0645** (2013.01 - EP US); **B01J 2203/0655** (2013.01 - EP US); **B01J 2203/066** (2013.01 - EP US); **B01J 2203/0685** (2013.01 - EP US); **C04B 2235/3826** (2013.01 - EP US); **C04B 2235/3834** (2013.01 - EP US); **C04B 2235/3839** (2013.01 - EP US); **C04B 2235/3843** (2013.01 - EP US); **C04B 2235/3847** (2013.01 - EP US); **C04B 2235/3891** (2013.01 - EP US); **C04B 2235/40** (2013.01 - EP US); **C04B 2235/404** (2013.01 - EP US); **C04B 2235/405** (2013.01 - EP US); **C04B 2235/408** (2013.01 - EP US); **C04B 2235/428** (2013.01 - EP US); **C04B 2235/5436** (2013.01 - EP US); **C04B 2235/5472** (2013.01 - EP US); **C04B 2235/616** (2013.01 - EP US); **C04B 2235/721** (2013.01 - EP US); **C04B 2235/77** (2013.01 - EP US); **C04B 2235/80** (2013.01 - EP US); **C04B 2235/96** (2013.01 - EP US)

Citation (search report)

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